

INTERNATIONAL SEARCH REPORT

PCT/GB 03/01596

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 E21B21/10 E21B43/10 E21B34/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 E21B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE WPI Section PQ, Week 198938 Derwent Publications Ltd., London, GB; Class Q49, AN 1989-277106 XP002248689 & SU 1 469 094 A (DRILLING TECHN RES), 30 March 1989 (1989-03-30) abstract	1-6, 8, 17, 18
Y		9-16, 19, 20
Y	GB 2 272 923 A (CARMICHAEL MARK) 1 June 1994 (1994-06-01) figure 1	9
Y	US 6 279 657 B1 (CARMICHAEL MARK ET AL) 28 August 2001 (2001-08-28) figures 4-6	10, 11
	-/-	



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
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- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

B document member of the same patent family

Date of the actual completion of the international search

23 July 2003

Date of mailing of the international search report

31/07/2003

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	GB 2 307 932 A (RED BARON) 11 June 1997 (1997-06-11) page 11, paragraph 1 figures 1,2	12-16, 19,20
X	US 6 161 632 A (HOVDEN MAGNE) 19 December 2000 (2000-12-19) column 11, line 26 -column 12, line 3	1-4,6-8, 17,18,21

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US 6279657	B1	28-08-2001	NONE	
GB 2307932	A	11-06-1997	AU 707132 B2	01-07-1999
			AU 1068997 A	27-06-1997
			CA 2236863 A1	12-06-1997
			EP 0865564 A1	23-09-1998
			WO 9721020 A1	12-06-1997
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			WO 9714868 A1	24-04-1997